

registrars to allow the non-medical professionals to gain necessary experience and competence.

**Measurement of improvement** The non-medical professionals needs training to be able to manage the required tasks autonomously, before the mapping process can be repeated.

**Effects of changes** We anticipate that training of the non-medical workforce to perform more advanced clinical tasks will result in more efficient patient care, with better provision of training and education for those existing trainees.

**Lessons learnt** A post-task debrief identified a degree of anxiety that the process was being used as a performance assessment tool. This suggests discordance between participants' performance and their declarative knowledge of the task. Another challenge was "mapping fatigue" that became particularly evident as the project progressed. Social acceptability determinants of self reporting affects the validity of data and to ensure the integrity of the data, data collection by independent observers may be a more effective method.

**Message for others** Diversifying the workforce is inevitable for paediatric departments in the future. The multi professional task analysis we undertook is a pathfinder for other organisations who will need to undergo similar change. While multi professional workforce use is well developed in other areas, there has to be recognition of the time required for non-medical professionals to develop the breadth of knowledge and skills required to function autonomously at middle grade level in general paediatrics. Targeted training would speed up the development process.

#### G566(P) CHECKLISTS FOR TIME-CRITICAL EQUIPMENT FAILURE DURING PATIENT TRANSPORT

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**Context** Time critical faults with equipment can and have occurred during patient transport.

**Problem** Equipment failure can be a major problem during transport as spare equipment is not available in a timely fashion. It is essential to rapidly identify and resolve the problem to avoid patient harm.

**Assessment of problem and analysis of its causes** Previously our transport team relied on the clinical experience of staff to diagnose the fault, as well as "Quick Guides" for equipment. These "Quick Guides" are often up to 10 pages long and can be difficult to utilise effectively in a stressful situation.

**Intervention** We drew on the experience of other professionals who also encounter time critical faults. Pilots utilise emergency procedure checklists provided by the Federal Aviation Administration, which supply an immediate action sequence to be followed during emergency situations.

The systematic approach used by pilots (one pilot concentrates on maintaining flight through their Aviate / Navigate / Communicate approach, whilst another runs the checklist in an attempt to diagnose the fault) could be transferable to a medical setting (where one team member concentrates on maintaining patient stability through the Airway / Breathing / Circulation approach, whilst another runs the checklist in an attempt to diagnose the fault).

We produced single page checklists for each of the three different types of ventilator used by our service (see example below). After positive feedback from staff, we are now

producing checklists for therapeutic hypothermia failure and nitric delivery system failure.

**Study design** Checklists are produced by staff concentrating on their area of expertise, and are checked by senior staff members and with equipment manufacturers where appropriate. Satisfaction with the use of checklists was assessed by survey and their ongoing use will be reviewed during simulator sessions.

**Strategy for change** Checklists have been used during staff training days, to provide an opportunity for staff to familiarise themselves with them, and to receive feedback about their use. Relevant checklists have now been attached to each transport trolley, for reference in emergencies. Staff from other transport teams have now asked for copies to develop their use within their service.

**Measurement of improvement** Satisfaction with the use of checklists is high, based on responses to the question "Do you find equipment failure checklists useful?" (1 – not at all useful to 5 – very useful). We will formally audit the time taken to diagnose equipment faults with and without checklists during simulator sessions for bank transport staff, and also plan to use these sessions to refine the checklists.

**Effects of changes** Our survey suggests staff feel more confident in dealing with time-critical equipment failure since checklists were introduced.

**Lessons learnt** The process of development of checklists highlighted variation in practice amongst staff and reinforced the need for an efficient systematic approach to be adopted. The format of "Challenge-verification-response" checklists has been tried and tested in the aviation field during time critical emergencies and we believe is transferable to a medical setting.

**Message for others** Although equipment failure is more critical during transport (where spares are not readily available), checklists may provide a systematic approach to other emergency situations, and could therefore be applicable in neonatal units and paediatric intensive care. However, the information contained in them must be rigorously checked and tested prior to use. In addition, the temptation to provide too much information or to provide too many checklists should be avoided, as this will dilute their effectiveness.

#### G567(P) IMPROVING EFFICIENCY AND QUALITY OF CARE IN THE PAEDIATRIC ASSESSMENT UNIT

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**Context** The Paediatric Assessment Unit (PAU) in our District General Hospital arose out of necessity and occupies a small space with limited privacy. Acute attendances continue to rise and demand for PAU increases.

**Problem** Some children wait an unacceptable time for senior paediatric review and flow through the unit is poor. Longer stays (>4–6 h) are inappropriate. Consultant input is variable and junior rotas are understaffed. Parental questionnaires stated dissatisfaction with waiting times and facilities.

**Assessment of problem and analysis of its causes** A working group (consultant and trainee Paediatricians, senior nurses) aimed to standardise and improve quality of care, specifically, improving waiting times and patient flow. To assess the scale of the problem we: